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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,493	06/02/2000	Hugh L. Brunk	60049	7276

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DIGIMARC CORPORATION
9405 SW GEMINI DRIVE
BEAVERTON, OR 97008

EXAMINER

COLIN, CARL G

ART UNIT	PAPER NUMBER
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2136

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,493

Applicant(s)

BRUNK, HUGH L.

Examiner

Carl Colin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on 4/25/2005, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. In response to communications filed on 4/25/2005, the following claims 1-20 are presented for examination.

2.1 Applicant's arguments in the brief, filed on 4/25/2005 with respect to the rejection of claims 1-20 have been fully considered but they are moot in view of the new ground(s) of rejection. Upon further consideration a new ground of rejection is made.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3.1 **Claims 1-18** are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,108,434 to **Cox et al.**

3.2 **As per claims 1 and 11, Cox et al** discloses a method for reading a digital watermark in a media signal comprising: assigning sets of media signal samples into blocks or groups that meets the recitation assigning sets of media signal samples into of classes, for example (see column 3, lines 25-65 and column 4, line 20 through column 5, line 6); computing a statistical distribution of the classes (see column 3, lines 25-65 and column 4, lines 50-67; see also figures

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2-5); and using the statistical distribution to detect or read a watermark in the media signal (see column 6, line 44 through column 7, line 17 and column 8, lines 20-45).

Claims 2-6 recite the same inventive concept as claim 1 except for using different signals. **Cox et al** discloses that the invention can be implied in multimedia data, video, image and wherein the samples are in a spatial or frequency domain (column 4, lines 30 through column 5, line 25 and column 1, line 45 through column 2, line 12).

As per claims 7-11, **Cox et al** discloses the limitation of wherein using the statistical distribution includes: repeating shifting for all translation and determining the signal with the highest correlation in order to determine the most likely translation factor and watermark that meets the recitation of assigning a figure of merit to a sample indicating a likelihood that the sample includes a recoverable portion of a watermark signal (column 3, lines 45-65); and using the figure of merit in a read operation wherein assigning a figure of merit includes assigning a weight to the sample indicating an extent to which the sample is likely to reflect valid watermark data (column 3, lines 45-65 and column 5, line 37 through column 6) and wherein using the statistical distribution includes: assigning a figure of merit or weight to a sample indicating a likelihood that the sample includes a recoverable portion of a watermark signal; and using the figure of merit in a watermark decoding operation, for example (column 3, lines 45-65 and column 5, line 37 through column 6).

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4.1 **Claims 12-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,108,434 to **Cox et al** in view of US Patent 6,553,127 to **Kurowski**.

4.2 **As per claims 12-14, Cox et al** substantially discloses assigning transformed samples of the image into classes using characteristics of the samples and modeling a statistical distribution of the samples in each of the classes and using the statistical model to detect a watermark. **Cox et al** does not explicitly disclose using characteristics based on signal activity of the samples. **Kurowski** in an analogous art discloses a method of detecting watermark using the criteria of measuring a variation of selected characteristics associated with each element of the sample and the detector attempts watermark detection only in those blocks having been determined to have the predetermined degree of variation of the selected characteristics (see abstract; column 3, line 5 through column 5, line 10; and columns 8-9); the advantage is by attempting detection only in such blocks, the number of detection computations is decreased and the watermark signal to data

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stream noise ratio is increased, thereby facilitating detection of even weak watermarks (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of **Cox et al** to assign samples into classes based on characteristics comprising signal activity of the samples because by grouping the weak signals from the more robust signal it would be easier to attempt detection only in blocks having been determined to have the predetermined degree of variation of the selected characteristics, thereby detection computations is decreased (abstract) as taught by **Kurowski**. The motivation to do so is given by **Kurowski** who teaches by grouping sample using characteristics based on signal activity of the samples (column 3, line 5 through column 5, line 10), the number of detection computations is decreased and the watermark signal to data stream noise ratio is increased, thereby facilitating detection of even weak watermarks (abstract).

Claims 15-20 recite the similar concept as found in the rejection of claims 12-14.

Kurowski also discloses estimating watermark signal based on the suspect signal (columns 9-10) as discussed above in claims 12-14. Therefore, these claims are rejected on the same rationale as the rejection of claims 1-11.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents	5,809,455	Nishigushi et al.	6,330,673 to Levine
	5,809,139	Girod et al.	6,539,475 to Cox et al

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6,330,672 Shur.

5.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl Colin whose telephone number is 571-272-3862. The examiner can normally be reached on Monday through Thursday, 8:00-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cc

Carl Colin

Patent Examiner

August 2, 2005


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100